Project #5031
3 November 1964

MEMORANDUM FOR THE RECORD

SUBJECT: Trip Report [redacted] STATINTL

STATINTL ATTENDEES: [redacted]

The above listed visited [redacted] on the STATINTL
morning of 29 October 1964 from 0930 to 1200 to discuss [redacted] devel- STATINTL
opment of a light amplifying screen utilizing dipolar suspension.

STATINTL 1. [redacted] began the discussion by asking if the quantum efficiency would truly be 100% as assumed in the mathematical analysis
STATINTL of the problem. [redacted] said that he thought that this would be the case because the materials (such as cupric chloride) that are going to be used are almost perfect absorbers of UV radiation. When absorbed the photons must be converted to electrons which ionize the material which in turn migrate to the face of the conductive coating.

2. One such conductive coating is shown in the attached graph. It has almost perfect (.9) transmittance of visible light and using UV with a wavelength of about 360 millimicrons one gets a transmittance of about .82. This coating has a resistance of 20,000 ohms/square in one mil thickness.

STATINTL 3. [redacted] said that light nearly parallel to the surface would be deflected at about a 39° angle with the normal upon striking the screen. He implied that where the dipoles were in the oriented position this light would be transmitted.

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4. The question concerning the dynamic image was raised. In the present proposal the dipoles will not change orientation if the incident radiation is changed but will change only if the electric field is released. [redacted] stated that the field could be changed at any rate needed. STATINTL STATINTL

5. The point of decay of ionization was then discussed. [redacted] thought that the decay would be instantaneous.

STATINTL 6. [redacted] expressed the opinion that there would be no migration of the ions over the surface of the conductor. This partly true because of the thinness of the suspension.

7. It is recommended that all of the above questions be answered in somewhat more detail before a contract is written. It would be STATINTL desireable to obtain [redacted] opinion in writing on the above subjects.

[redacted] STATINTL
Development Branch, P&DS

Distribution:
Orig - Project file
1 - Company file
STATINTL 1 - [redacted]
1 - chrono